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PATENT
Attorney Docket No. 02473.0001-00000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of	
Paul Yurt, et al.	
Serial No. 07/637,562	Group Art Unit: 262
Filed: January 7, 1991	Examiner:
For: AUDIO AND VIDEO TRANSMISSION AND RECEIVING SYSTEM	

Hon. Commissioner of Patents
and Trademarks
Washington, DC 20231

Sir:

PETITION TO MAKE SPECIAL UNDER
M.P.E.P. § 708.02(VIII)

Applicants hereby petition the Commissioner of Patents and Trademarks under M.P.E.P. § 708.02 (VIII) to make this application special and receive accelerated examination. In accordance with that section, Applicants have enclosed a check for $80.00 to cover the fee for this petition as set forth in 37 C.F.R. § 1.17(i). If any additional fees are required in connection with the filing of this Petition, please charge those fees to Deposit Account No. 06-916.

All claims presented for examination are believed to be directed to a single invention. If, however, the Examiner requires a restriction, Applicants provisionally elect for prosecution whichever group of claims contains method claims 18-21.

Also in accordance with M.P.E.P. §708.02 (VIII), Applicants affirm that a preexamination search has been made

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by an attorney who conducted searches in class 358, subclass 86 and class 455, subclasses 4, 5, 86, 102, 135, and 136.

The following references were developed during the searches and during subsequent investigations, and a copy of each of these references is enclosed along with a copy of PTO Form FB-A820 listing these references.

DESCRIPTION OF THE CLAIMED INVENTION

The present invention is directed to an audio and video transmission and receiving system in which the user controls the access and the playback operations of selected material. The present invention affords the user greater access to and control over audio and video information than is possible in conventional systems. With the present invention, a user can request audio and video information to be sent to a selected destination. Further, the user is not constrained to having programs played at a particular time because the system has a buffering capability. By employing such buffering, the user has individualized control over the replay of requested programs. Moreover, requested programs are sent to the user in a compressed format. This enables the system to send requested programs to users in a relatively short time period, and allows users to store large quantities of requested material for playback at a desired time.

The entire system includes a transmission system and a reception system. The transmission system includes a source material library from which a user makes a selection. The selected program is processed and compressed for storage in a

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compressed data library. The system control computer controls access to programs stored in the compressed data library and controls transmission of selected programs to a user.

Once a selected program is transmitted, the reception system of the present invention receives the program and buffers it in a storage section. Because the program is buffered, the user can choose to replay the stored program whenever desired. When replay is requested, the program is decompressed and played back in real time at the receiving device requested by the user.

Figs. 2A and 2B of the application are detailed block diagrams of a preferred implementation of the transmission system of the present invention. Fig. 2B shows an implementation of the compressed data storing means recited in claim 1 as the compressed data library 118. Fig. 6 is a block diagram of a preferred implementation of the receiving system of the present invention. Fig. 6 shows an implementation of the storing means required in claim 22 as element 203. Fig. 7 is a flowchart of a preferred method of distribution which shows the buffering step at step 418.

Claims 1-17 are directed to a transmission system for providing information to remote locations. The system recited in those claims includes library means, for example source material library 111, for storing items. A requested program is encoded in the identification encoding means, for example identification encoder 112, which assigns the requested program with a unique identification code. The requested program is also converted by the converting means, for example converter 123, and ordered into a sequence of addressable data block by the ordering means, for

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example time encoder 114 and precompression processor 115. Subsequently, the program is compressed by compression means, such as compressor 116, and stored in the compressed data storing means, which may be compressed data library 118. The identification means, the conversion means, the ordering means, and the compressed data stores storing means will be collectively referred to as preprocessing elements. Transmitter means, for example transmitter format means 119 and transmitter 122, transmit the requested program to the user.

Claim 7 calls for a system control interface means for generating a visually-perceptible list of the items available in the compressed data library, and library access interface means, which may be library access interface 121, which receives transmission requests and retrieves formatted data blocks stored in the compressed data library means.

Claims 18-21 cover a distribution method responsive to user requests identifying information to be sent from a transmission system to remote locations. This is shown in Figure 7. The distribution method of independent claim 18 includes the steps of processing audio and information for storage in a compressed data form (steps 413a-413e), storing audio and video information in a compressed data form (step 414) and user request of the stored information for transmission to a selected remote location (step 415). The method also includes the steps of sending the compressed information to a remote location (step 416) and receiving it there (step 417). After reception, the distribution method includes buffering the received information (step 418) and

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playing it back in real time at a time requested by the user (step 419). The distribution method recited in claim 21 further includes, the step of storing a list of items available to the user from at least one compressed data library, and providing the user with the list so that the user may remotely select a particular item for transmission.

Claims 22-32 are directed to a receiving system responsive to a user input identifying an item stored in a source material library to be played back to the subscriber at a location remote from the source material library, the item containing information to be sent from a transmitter to the receiving system. The reception system 200 comprises transceiver means, such as transceiver 201, which receives requested information from the transmitter as compressed formatted data. The received information is converted into a format suitable for storage and playback in real time in the receiver format conversion means, which may be receiver format converter 202, and then stored as compressed data in the storage means, for example storage 203. When playback is requested, the decompressing means, for example audio decompressor 209 and video decompressor 208, decompresses the information and the output conversion means, such as output converter 206, plays back the decompressed information in real time at a time specified by the user.

As recited in claim 27, the output data conversion means further comprises digital video output means, for example video output converter 211, and analog video output means, for example analog video output converter 213. According to claim 30, the

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output data conversion means also includes digital audio output means, for example digital audio output converter 212, and analog audio output means, for example analog audio output converter 214. Claim 32 recites that the transceiver means, such as transceiver 201, receives information via any one of telephone, ISDN, broadband ISDN, satellite, common carrier, computer channels, cable television systems, MAN, and microwave.

DETAILED DESCRIPTION OF THE REFERENCES

A. REFERENCES CITED IN THE SPECIFICATION

1. Lang, U.S. Patent No. 4,963,995

Lang, which is discussed in the Background of Invention portion of the specification, discloses an audio/video transceiver apparatus (VCR-ET) that includes a compression capability. The VCR-ET of Lang is an improved audio/video recorder which has "added features and functions which significantly enhance its usefulness and functionality." See col. 1, lines 65-68. Specifically, Lang discloses an audio/video transceiver with the capability of editing or copying from one video tape to another using only a single tape deck. Lang further discloses a VCR-ET which can re-transmit a program to a second VCR-ET. See Col. 7, lines 60-64.

Lang does not disclose a transmission system as recited in independent claim 1 because Lang does not teach or suggest a transmission system for providing information to remote locations which includes library means for storing items. Lang also does not teach or suggest an identification encoding means for

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retrieving the information for the items from the library means and for assigning a unique identification code to the retrieved information

Lang also is not concerned with providing a distribution method responsive to user requests identifying information to be sent from a transmission system to remote locations. Accordingly Lang fails to teach or suggest the steps of the distribution method claimed in independent claim 18.

Because Lang is directed to an improved VCR, Lang does not disclose a receiving system which is responsive to user requests for items from a source material library. While Lang mentions that video libraries are "envisioned," there is no disclosure of how material would be requested or retrieved from such libraries. See col. 7, line 67 of Lang. Particularly, Lang does not teach that user requests will cause items stored in a source material library to be sent from a transmitter to a receiving system, as called for in independent claim 22.

2. **Monslow et al., U.S. Patent No. 4,890,320**

Monslow et al., which is also described in the Background of Invention section of the specification, discloses a system which broadcasts viewer-selected material to a viewer at a prescribed time. However, the Monslow et al. system requires multiple users in multiple locations to view the requested material at the time it is broadcast, rather than allowing each viewer to choose his or her own viewing time. Once the choice is made, the user cannot change it because Monslow et al. does not provide for buffering a

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selected program so that the user can play it back at a desired time. See col. 6, line 60 through col. 7, line 28.

Further, in Monslow et al., the viewer-chosen program is transmitted to the television receiver of the requesting viewer. The requestor therefore does not have a choice of where the information that they request is sent. See the Abstract, Fig. 1, and col. 5, lines 27-39.

With regard to the claims, Monslow et al. does not teach or suggest the preprocessing elements called for in independent claim 1, the buffering step required in independent claim 18, or the storage means recited in independent claim 22.

3. Abraham, U.S. Patent No. 4,590,516

Abraham '516, which is another reference described in the Background of Invention portion of the specification, discloses a combined telephone and modulated carrier communication system. In Abraham '516, a user at a subscriber station 10 uses a standard telephone set 16 to contact program service station 12. The user selects a program from the library 36. A telephone communication link is established with the station 12 through the switching gear 20, and when the program selection operation from the library 36 is completed, a return signal is heard by the subscriber through the telephone. The user then hangs up the telephone which initiates program readout and sets the billing computer 28. A timed message period precedes transmission of the program. After the message period ends, the selected program is transmitted and the billing operation is performed. During the message period,

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the subscriber can call up and cancel transmission of the program. See col. 4, line 38 through col. 5, line 3 and Fig. 1.

The system in Abraham '516 uses a dedicated signal path, rather than multiple common carriers, to transmit audio/video programming. Also, the receiver has no storage capability. Furthermore, the system provides for only display functions, which limits viewing to the time at which the material is ordered, and, like Monslow et al., the Abraham '516 system does not allow for the stop, pause, and multiple viewing functions of existing VCR technology.

Because Abraham '516, like Monslow et al., discloses relative simultaneous transmission of the requested material, this reference does not teach or suggest the compressed data storage means recited in independent claim 1, the buffering step required in claim 18, or the storage means called for in claim 22.

4. Walter, U.S. Patent No. 4,506,387

Walter, also discussed in the Background of Invention section of the specification, discloses a fully dedicated, multi-conductor, optical cable system that is wired to the viewer's premises. Although the system affords the viewer some control over accessing the material, it requires that a location designated by the viewer be wired with a dedicated cable. The Walter system further requires that the viewer be at that location for both ordering and viewing the audio/video material.

In Walter, information is retrieved from the memory modules 24-35. A host computer 20 controls output of desired material over optical fibers 129, 94, 96, 98, and 100 to data receiving

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system 146. After selection from memory modules, there is no provision in Walter for storing the requested material in a compressed form. Therefore, Walter does not teach or suggest the preprocessing elements required in independent claim 1. Additionally, there is no teaching or suggestion in Walter that only a portion of an item stored in the library modules 24-34 can be sent to a subscriber, as further recited in independent claim 1.

Walter shows memory module 102 in the data receiving system 14, but there is no indication in Walter that compressed data is stored in memory module 102. Because non-compressed data is stored in the memory module, the user is limited as to the quantity of data which may be stored therein. Accordingly Walter does not teach or suggest buffering the received information, which is compressed, at the remote location, as recited in independent claim 18, or a receiver including storage means, coupled to receiver format conversion means, for storing compressed formatted data, as set forth in independent claim 22.

B. REFERENCES CITED IN THE SEARCH REPORT OF 09/07/90

1. Lumelsky, et al., U.S. Patent No. 4,949,169

Lumelsky et al. discloses an audio-video data interface for a high speed communication link in a video-graphics display window environment. A "primary objective" of Lumelsky et al. is to "provide a simple interface to a high speed digital communication network such that full motion video window images and its audio sampled by one node can be transmitted over the network to other nodes." See col. 5, lines 25-30 and Figs. 1A and 1B.

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Because Lumelsky et al. is directed to interface architecture for connecting video display devices, it is not directed to a transmission system or a receiving system, as respectively recited in independent claims 1 and 22. Further, because Lumelsky et al. is concerned only with interconnecting display devices, it is not concerned with the distribution of information from a transmitter to a receiver, and therefore it does not teach or suggest buffering received information at a remote location, as recited in the distribution method of independent claim 18.

2. Fenwick et al., U.S. Patent No. 4,947,244

Fenwick et al. discloses a video program distribution system. The system includes controller 116 which receives and responds to user requests from monitors 102. The controller 116 also controls the switch 114 which is connected to the video sources 112. See col. 3, lines 29-36. The video sources 112 are video cassette players. The number of video cassette players used in a system will vary between thirty-two and ninety depending on the range of programming desired. See col. 5, lines 15-20.

In Fenwick et al., the video sources 112 must be manually controlled. Because the system is manually controlled, Fenwick et al. does not disclose a transmission system including identification encoding means for retrieving the information for the items from a library and for assigning a unique identification code to the retrieved information, as required in independent claim 1. Moreover, in Fenwick et al., information is sent directly from video sources 112 to the monitors 102 and is not stored prior to replay. Therefore, Fenwick et al. also does not

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disclose buffering received information at a remote location, as required in independent claim 18 or a storage device at the receiver, as required in independent claim 22.

3. Boulton, U.S. Patent No. 4,937,821

The Boulton patent discloses an information delivery system for delivering reference information to a plurality of users. In Boulton, information from data sources 12 is encoded in encoders 14 and mixed in mixers 16 and 18 for delivery over a cable 24 to a user. The information is neither transmitted nor received by the user in a compressed form. Boulton also does not show the requested information being stored prior to transmission to a user. Boulton therefore does not teach or suggest a transmission system including the preprocessing steps or compressed data storing means, as recited in independent claim 1, or the step of storing audio and video information in a compressed data form, as recited in independent claim 18. Because Boulton also does not show the requested information being stored at the receiving device of a user, Boulton does not teach or suggest storage means for storing compressed formatted data, as recited in independent claim 22.

4. Eggers et al., U.S. Patent No. 4,920,432

The Eggers et al. patent discloses a system for random access to an audio video library with independent selection and display at each of a plurality of remote locations. The system in Eggers et al. includes a video filer 2, which is a microprocessor-controlled mechanical storage and retriever device, that transports discrete data record items, i.e., video cartridges,

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between a rectangular array of storage sites 12 open on one side, and an adjacent array of playback devices 11. See col. 3, lines 36-40. Video signal combiner 4 directs the outputs of all of the signal sources, including players 11, to the user terminals 8 by way of a video cable 17.

Eggers et al. does not teach or suggest the identification encoding means for retrieving the information from the library and for assigning a unique identification code to the retrieved material, as called for in independent claim 1. Eggers et al. also does not teach storage of the requested material at the receiving device prior to replay. Therefore, Eggers et al. does not teach or suggest the buffering step set forth in independent claim 18. Moreover, because the material is sent directly from the filer 2 to the user terminals 8, Eggers et al. does not teach or suggest the storage means called for in independent claim 22.

5. Bestler et al., U.S. Patent Nos. 4,807,023 and 4,755,872

The Bestler et al. patents relate to an "impulse pay per view" system. In the Bestler et al. system, a user can receive a specific cable program by requesting that it be unscrambled at his receiver. The user enters a password which causes the authorization code in his converter to change thereby allowing him to view the desired cable event. See col. 14, lines 58-64 of Bestler et al. '023 and col. 14, lines 49-55 of Bestler et al. '872.

In the Bestler et al. patents, programming is sent directly to the viewer's cable television receiver. Because the requested programming is directly transmitted, neither of the Bestler et al.

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patents teaches buffering requested programming. Therefore, neither of the Bestler et al. patents teaches or suggests the preprocessing elements recited in independent claim 1, the buffering step required in independent claim 18, or the storage means called for in independent claim 22.

6. Gordon et al., U.S. Patent No. 4,763,191

The Gordon et al. patent discloses a system providing an "800" dial-a-view program for ordering a selection through a telephone networking arrangement. The Gordon et al. system includes routing database 101 for directing a dial-a-view call received by a toll network switching office 102 to centralized network equipment 103. Vendor equipment 104 supplies the requested subscription television programming to the calling customer television 105 at customer premises 122 via decoder 106 and coaxial cable 160. See Fig. 1 and col. 5, lines 3-23.

Fig. 2 of Gordon et al. shows another embodiment of vendor equipment 104. In this configuration, vendor equipment 104 includes local vendor equipment 201 to serve customer premises 122 via cable 160. Satellite facilities 202 and 203 provide individual programming whereby information is transmitted to the local vendor equipment 201. Equipment 201 includes program distribution equipment 207 and a billing system 208.

In Gordon et al., there is no provision for storage of requested programming before transmission to the user or for storage before the programming is played. Because there is no storage, Gordon et al. does not teach or suggest the preprocessing elements recited in independent claim 1, the buffering step

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required in independent claim 18, or the storage means called for in independent claim 22.

7. Southworth et al., U.S. Patent No. 4,400,717

The Southworth patent relates to a color slow-scan TV system and method. The system includes video compressor 25 which receives a color signal from a video input 27. The output of the memory in video compressor 25 is displayed on a TV monitor 29 which indicates the image to be transmitted. The memory is read out slowly and transmitted over a transmission channel 31 to a video expander 33 and displayed at TV monitor 35. See Fig. 1 and col. 2, lines 33-49.

Because Southworth, et al. is concerned with the slow scan, it is not directed to reception and distribution of audio and video information from libraries to remote user locations, as in the present invention.

8. Lambert, U.S. Patent No. 4,381,522

The Lambert patent relates to a cable television system which includes a minicomputer 11 that responds to signals from viewers at remote receiving locations 18. Desired programs are sent only at specified times and only over specified cable channels. See col. 2, line 49 through col. 3, line 18. In Lambert, the subscriber has limited control over when a program will be played because computer 11 assigns a channel, start and stop time for the selected program. Moreover, there is no provision for storage of requested data prior to transmission, or for storage at the receiving device of the user. Accordingly, Lambert does not teach or suggest the preprocessing elements called for in independent

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claim 1, the buffering step required in claim 18, or the storage means recited in claim 22.

9. Cannon, U.S. Patent No. 4,122,299

The Cannon patent discloses a data output modifying system. The system places data from a television display into a format for acceptance by a general purpose communications printer. Cannon is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

10. Stetten et al., U.S. Patent No. 3,746,780

The Stetten et al. patent relates to a video display system including a transmission system whereby a subscriber 4 uses telephone 6 to select video display information stored in storage section 30. The information is sent directly to TV receiver 34. There is no provision in Stetten et al. for storing requested information after selection and prior to transmission. Further, Stetten et al. does not show the data sent to TV receiver 34 in a compressed format.

Therefore, Stetten et al. does not teach or suggest a transmission system including the preprocessing elements recited in independent claim 1, or the step of storing audio and video information in a compressed data form, as recited in independent claim 18. Also, there is no provision for storing the requested information at the receiver of Stetten et al. Accordingly, Stetten et al. also does not teach or suggest storage means for storing compressed formatted data, as recited in the receiver system of independent claim 22.

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C. REFERENCES CITED IN THE SEARCH REPORT OF 6/19/90

1. **Music et al., U.S. Patent No. 4,914,508**

The Music et al. '508 patent relates to a method and system for compressing and statistically encoding color video data. Fig. 1 shows a diagram of the system and method for compressing color video data and Fig. 7 shows the system and method for decompressing color video data. Because Music et al. '508 relates only to compression and decompression of color video data, Music et al. '508 is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

2. **Okamura et al., U.S. Patent No. 4,907,081**

The Okamura et al. patent relates to a compression and coding device for video signals. The object of Okamura et al. is to provide a coding device capable of suppressing signal deterioration (error propagation, etc.) accompanying the coding and of reducing the necessary average number of bits per sampled data. See col. 2, lines 12-16. Okamura et al. is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

3. **Golin et al., U.S. Patent No. 4,868,653**

The Golin et al. patent relates to an adaptive digital video compression system. Particularly, Golin et al. is directed to meeting the need for a compression system for providing a compressed digital video signal representative of a full motion color video signal which is suitable for recording or transmission using relatively narrow band media and which may be decompressed

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at speeds at least equal to conventional video frame rates. See Col. 1, lines 44-50. Because Golin et al. is concerned only with signal compression, Golin et al. is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

4. **Music et al., U.S. Patent No. 4,847,677**

The Music et al. '677 patent relates to a video telecommunication system and method for compressing and decompressing digital color video data. Fig. 1 shows a diagram of the system and method for compressing color video data and Fig. 7 shows the system and method for decompressing color video data. Because Music et al. '677 relates only to compression and decompression of color video data, Music et al. '677 is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

5. **Hirashima, U.S. Patent No. 4,833,710**

The Hirashima patent is directed to a pay television system capable of effectively preventing illegal access to certain programming by being charge codes to indicate how much money a subscriber owes, and denying of access to the system unless the bill is paid. In Hirashima, requested programming is sent directly to the television receiver 17. See Fig. 2.

Because Hirashima directly transmits programming, it does not disclose buffering and therefore does not teach or suggest the preprocessing elements recited in independent claim 1, the

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buffering step recited in independent claim 18, or the storage means recited in independent claim 22.

6. Keith et al., U.S. Patent No. 4,785,349

The Keith et al. patent relates to a digital video decompression system. Particularly, Keith et al. shows a system for compressing and formatting a full motion color digital video signal. Because Keith et al. relates only to a decompression system, Keith et al. is not concerned with a transmission, reception or distribution system responsive to user requests for information, as is the present invention.

7. Okada et al., U.S. Patent No. 4,734,765

The Okada et al. patent discloses an audio/video information transmission system which includes subscriber terminal 5 from which information is requested and then delivered to and received a TV receiver 52. The subscriber terminal 5 is coupled to sub-center 6 which communicates with center 3 having audio and video files 1. See Figs. 1 and 2

In Okada et al., the subscriber request is processed and the information is sent directly to the subscriber terminal. There i no provision for storage of the requested information prior to transmission or for storage by the user at the receiver so that he for replay at a desired time. Therefore, Okada et al. does not teach or suggest the preprocessing elements recited in independent claim 1, the buffering step required in claim 18, or the storage means called for in independent claim 22.

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8. Eilers et al., U.S. Patent No. 4,688,246

The Eilers et al. patent relates to a CATV transmission system for a CATV scrambled signal with compressed digital audio in the horizontal intervals. Because Eilers et al. is only concerned with a transmission system, it does not teach or suggest the steps of the distribution method set forth in independent claim 18 or the receiving system set forth in independent claim 22.

Regarding the transmission system, Eilers et al. sends items directly to users and does not provide for storage of compressed data prior to transmission. Therefore, Eilers et al. does not teach or suggest a transmission system including the preprocessing elements required in the transmission system recited in independent claim 1.

9. Catros et al., U.S. Patent No. 4,679,079

The Catros et al. patent is concerned only with a method and system for bit-rate compression of digital data between a television transmitter and receiver. Catros et al. is not concerned with a transmission, reception or distribution system responsive to user requests for information as in the present invention.

10. Nakajima et al., U.S. Patent No. 4,538,176

The Nakajima et al. patent discloses a video/audio transmission system for sending video and audio information from video and audio files of a center 4 to a subscriber terminal 7. The arrangement includes a sub-center 8 which has a buffer memory 2. See Fig. 2. The information requested from center 4 is

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sent to the sub-center 8. In sub-center 8, the video is separated from audio and sent to buffer 25. Audio is decompressed in changeover/output unit 24 and combined with video in combining and output unit 26. The decompressed information is then sent to subscriber terminal 7b over line 5. See Figs. 3 and 6A and col. 4, line 50 through col. 5, line 6.

In Nakajima et al., the subscriber request is processed and the information is sent directly to the subscriber terminal. There is no provision for storage of the requested information prior to transmission to the user or storage by the user so that to replay at a desired time. Therefore, Nakajima et al. does not teach or suggest the preprocessing elements recited in independent claim 1, the buffering step required in claim 18, or the storage means called for in claim 22.

11. Tiemann et al., U.S. Patent No. 4,533,936

The Tiemann et al. patent relates to a system for encoding and decoding video signals to reduce the bandwidth required for transmission thereof over a transmission channel, a broadcast channel or a storage medium. See col. 1, lines 5-9. Because Tiemann et al. is concerned solely with encoding and decoding video signals, that reference is not related to the transmission, reception or distribution system responsive to user requests for information of the present invention.

12. Lovett, U.S. Patent No. 4,450,477

The Lovett patent discloses a television information system wherein a control station 140 sends a unique modulated carrier frequency signal to the subscriber terminal 129 of a user.

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Privacy is guaranteed by dedicating a different carrier frequency to each subscriber. There is no provision for storage of the requested information prior to transmission or by the user so that he or she can replay it at a desired time. Therefore, Lovett does not teach or suggest the preprocessing elements recited in independent claim 1, the buffering step required in independent claim 18, or the storage means called for in independent claim 22.

13. **Parker et al., U.S. Patent No. 4,009,346**

The Parker et al. patent relates to distributional activity compression. Particularly, Parker et al. concerns a modular hierarchical approach to time division multiplex (TDM) switching relative to time division multiplex access (TDMA) facilities, particularly earth satellite TDMA facilities. Parker et al., however does not relate to the transmission, reception or distribution system responsive to user requests for information of the present invention.

14. **Flemming, U.S. Patent No. 4,009,344**

The Flemming patent relates to interrelated switching, activity compression and demand assignment. Specifically, Flemming concerns an access method and modular station apparatus for switching voice and data signals relative to a TDMA link, especially a satellite. See col. 3, lines 3-5. Flemming is not related to the transmission, reception or distribution system responsive to user requests for information of the present invention.

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15. Jackson et al., U.S. Patent No. 3,599,178

The Jackson et al. patent relates to a method of storing information on and retrieving information from a magnetic drum. Jackson et al. employs selective mapping of information on a magnetic drum to permit rapid access and retrieval. Because Jackson et al. is concerned only with the storage of information, Jackson et al. does not relate to the transmission, reception or distribution system responsive to user requests for information of the present invention.

D. OTHER REFERENCES

1. Cohen, U.S. Patent No. 4,949,187

The Cohen patent relates to a video communication system having a remotely controlled central source of video and audio data. Cohen shows a block diagram of the remotely-controlled central source of video and audio data. Disks 12, 14, 16, 18, 20, 22, 24, and 26 store frequently accessed movies. The disks are read by drives controlled by a disk controller 28, 30. Movies that are only accessed infrequently are archived on a tape archival system 32 which is controlled by tape driver 34. The distribution system CPU 36 controls the bidirectional flow of data from disks 12-26 and tape archival system 32. See col. 1, lines 1-18.

In order to output a plurality of movies simultaneously, several controllers 42, 44, 46, and 48 are used which output signals to multiplexor 58 for transmission over telephone line 60. See Fig. 4 and col. 4, lines 30-46. Cohen does not teach that the information transmitted over telephone line 60 is compressed, and

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therefore does not teach or suggest compression means for compressing formatted and sequenced data or the compressed data storage means for storing as a file the compressed, sequenced data, as recited in the transmission system of independent claim 1. Cohen also does not teach or suggest the step of storing audio and video information in a compressed data form, as recited in the distribution method of independent claim 18.

Figs. 1-3 of Cohen show the receiving device. Incoming serial data on phone line 112 is processed by modem 110 and is forwarded by central processing unit 104 to the disk storage system 114 via disk controller 116. Cohen does not indicate that the incoming signals are received in a compressed format. Because Cohen does not receive the signals in a compressed format, Cohen also does not teach or suggest the decompressing means for decompressing the compressed formatted data, as recited in the receiving system of independent claim 22.

2. **Yabiki et al., U.S. Patent No. 4,518,989**

The Yabiki et al. patent is commonly assigned to the assignee of the Okada et al. and Nakajima et al. patents. Yabiki et al. shows a plurality of repeaters 6 between center 4 and sub-center 8 and between sub-center 8 and subscriber terminal 7. In Yabiki et al., a subscriber request is processed and the information is sent directly to the subscriber terminal. There is no provision for storage of the requested information prior to transmission or by the user so that he or she can replay it at a desired time. Therefore, Yabiki et al. does not teach or suggest the preprocessing elements recited in independent claim 1, the

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buffering step required in independent claim 18, or the storage means called for in independent claim 22.

3. Abraham, U.S. Patent No. 4,567,512.

The Abraham '512 patent discloses a recorded program communication system. In this system, subscribers communicate with a library computer 28 via a telephone connection. The telephone system 12 is coupled to a command unit 24 from which the subscriber enters his or her choices. With command terminal unit 24, the subscriber has access to information in the library station 18 and provides billing information to the billing station 27. See col. 4, lines 45-49.

By using command unit 24, the subscriber enters selection data obtained from a printed program guide which identifies each program in the library and its associated program number. Based on the same program guide, the subscriber selects one of the available time segments for the selected program. See col. 7, lines 24-32 and Fig. 3. With the system in Abraham '512, the subscriber may not change the time a program can be viewed. This is because there is no provision for storage of the requested program prior to transmission or for storage at the receiving device of the user. Therefore, Abraham does not teach or suggest the preprocessing elemetns recited in independent claim 1, the buffering step required in independent claim 18, or the storage means called for in independent claim 22.

4. Abraham, U.S. Patent No. 4,521,806

Abraham '806 relates to a method of generating and processing audio/video broadcast signals in a subscription communication

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system. In Abraham '806, as with Abraham '512 and '516, the requested information is not stored prior to transmission and the subscriber cannot store the requested information at his or her station. Therefore, the subscriber can only receive information substantially simultaneously to the request for it. Because requested information is not stored prior to transmission or at the user's receiving device, Abraham '806 does not teach or suggest the preprocessing elements recited in independent claim 1, the buffering step required in independent claim 18, or the storage means called for in independent claim 22.

5. Bushnell et al., U.S. Patent No. 4,071,697

The Bushnell et al. patent relates to an interactive video/telephone transmission system wherein a user can view merchandise information at home. The system includes a capability of calling particular stores offering the viewed merchandise to registering a request to purchase selected merchandise. The user does not receive anything at his receiver 12 in response to his request to purchase selected merchandise. Rather, in Bushnell et al., the user simply views merchandise and then calls a store to order that merchandise.

6. Zeidler et al., U.S. Patent No. 4,062,043

The Zeidler et al. patent relates to a light wave transmission and distribution system in which at least one optical transmitter is used to distribute television programming to a plurality of receivers through light conducting fibers.

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7. Ohrenstein

The Ohrenstein article describes a data storage system with a high performance parallel interface (HPPI).

8. Morreale et al.

The Morreale et al. article discusses metropolitan-area networks (MAN).

CONCLUSION

None of the references renders the pending claims invalid under 35 U.S.C. § 103. Furthermore, there is no reasonable combination of references which can be combined under 35 U.S.C. § 103 to render the pending claims obvious to a person of ordinary skill.

The requirements of M.P.E.P. §708.02 (VIII) having been met, and the pending claims being allowable over the references, Applicants request that this Petition to Make Special be granted and that claims 1-32 of this application be passed to issue as quickly as possible.

Respectfully submitted,

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By: [signature]
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